

A NEW NATURAL HISTORY.<sup>1</sup>

IN our notice of the earlier portion we stated that it was then impossible to arrive at a definite conclusion as to the merits of this work, since the section in question was more or less introductory in its nature. Now that the author has got into the full swing of his

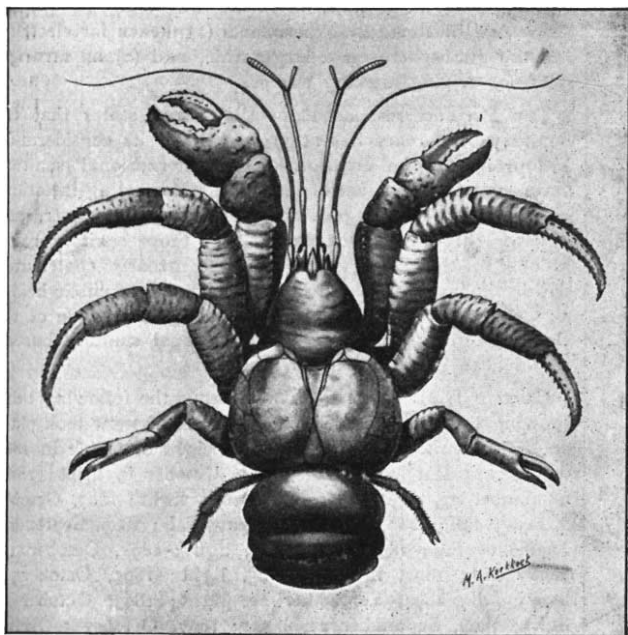


FIG. 1.—Cocoa-nut Crab (*Birgus latro*). From Davis's "Natural History of Animals."

subject, such a judgment is possible, and we have much pleasure in saying that our own verdict is in the main one of decided approbation. The author has had practically a new field before him, so far, at least, as English natural histories are concerned, in the mode of treatment of his subject, and the work ought to prove invaluable to all teachers of "nature-study." The illustrations—both coloured plates and text-figures—are in many cases excellent, some of them depicting the animals in attitudes or actions connected with the subject of the text. Examples of this type of illustration are afforded by the figure of a secretary-bird beating down a snake with its wings and beak, and that of a chamæleon darting its tongue at a fly.

In the first of the two half-volumes before us, the author commences by treating of the food of animals and the structural modifications of the animals themselves in correlation therewith, a subject which

occupies the whole of one of the fasciculi and part of the other. This part of the subject is divided into three sections, according as to whether the diet is of an animal, vegetable, or mixed nature, each main group being taken in serial order in the several sections, commencing with mammals and finishing with zoophytes and sponges. Animal defences forms the title of the next main division of the subject. Here protective coloration and colour changes, mimicry, and the reason why so many animals are nocturnal, are discussed at length, and in the main satisfactorily, although all the latest observations on the former part of the subject are not mentioned. Passive defence, as exemplified by dermal armour, shells, the rolling-up habit, and the death-feigning instinct, and then active defence receive in turn their due share of attention, the second half-volume ending with an excellent dissertation on the various forms of animal respiration.

Unfortunately, the general excellence of the book is somewhat marred by certain blemishes. Confining our criticisms to a single group of animals, we have in the dental formula of the cat on p. 7 the number of pairs of incisors given as two instead of three. Nor can this error be attributed to the printer, for, although the total number of teeth in the animal is rightly given as thirty, the incisors are referred to in the text (as well as in the formula) as being eight, in place of twelve, in number. Moral, in proof-reading always add up your dental formula. Again, in the explanation of the figure of the dentition of the thylacine on p. 16, it would have avoided liability to error if the number of upper incisors had been alluded to as *four pairs* instead of *four*. Perhaps it is a venial error to per-

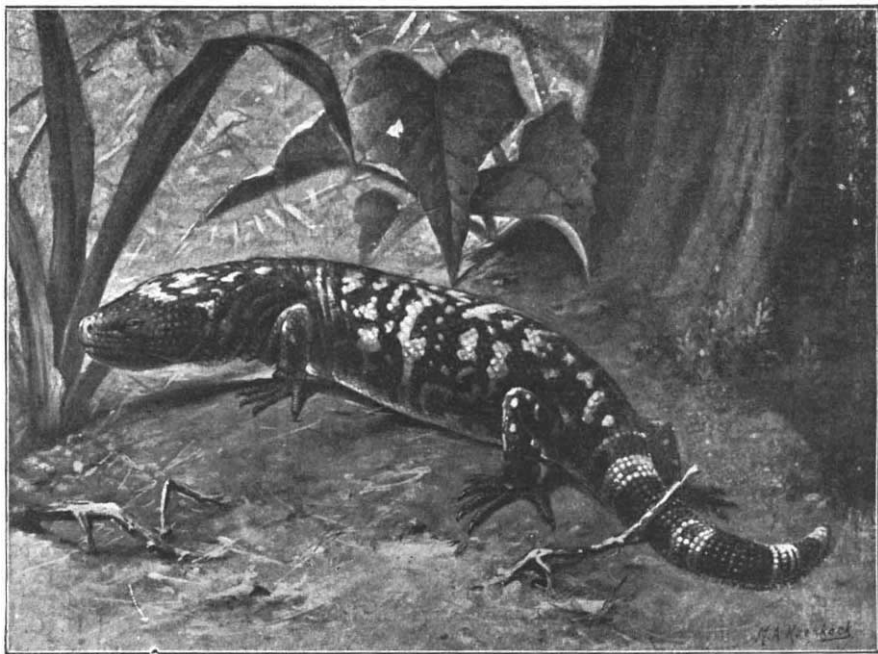


FIG. 2.—Gila Monster, or Arizona Poisonous Lizard (*Heloderma suspectum*). From Davis's "Natural History of Animals."

petuate (p. 9) the old idea that the coloration of the tiger is designed solely to harmonise with an Indian grass-jungle, but it shows a decided want of acquaintance with modern zoological work to allude

<sup>1</sup> "The Natural History of Animals." Half vols. iii. and iv. By J. R. A. Davis. (London: Gresham Publishing Co., 1903.)

to the aard-wolf (p. 15) as a solely South African animal. More serious is the repetition of the error that blue foxes are the summer representatives of white foxes (p. 19), both being, as a matter of fact, in the winter coat. In our notice of the first two parts, we directed attention to a discrepancy between the lettering of some of the coloured plates and their descriptions; the same thing occurs in the plate of the polar bear facing p. 20, the animal being called *Ursus arctos* in the one place and *U. maritimus* in the other. Finally (p. 172), *Euelephas* is not the generic name for the Indian elephant, while there is no sort of justification for alluding to the polecat (p. 289) as *Putorius ermineus*, and the weasel (p. 290) as *Mustela vulgaris*, both animals belonging to the same genus, whether this be called by the one name or the other.

As samples of the better class of illustrations in this volume, we reproduce the figures of the cocoa-nut crab (Fig. 1) and of the "Gila monster," or Arizona poisonous lizard (Fig. 2). R. L.

### NOTES.

THE American Academy of Arts and Sciences has, says *Science*, elected Dr. Joseph Larmor, F.R.S., as foreign honorary member in succession to the late Sir G. G. Stokes

THE eighty-fifth session of the Institution of Civil Engineers was opened on Tuesday, when Sir William White, the new president, delivered an inaugural address of great importance, in which he discussed the main lines of recent advance in ship construction, the present conditions of British shipping and ship-construction, and warship building since 1860.

It is announced by the *Electrician* that this year it is proposed to award the Nobel physics prize to Signor Marconi, the chemistry prize to Prof. Arrhenius, and the medicine prize to Prof. Finsen. Each prize is worth about 8000*l*.

THE United States National Academy of Sciences will hold its autumn meeting in Chicago, beginning on November 17.

WE regret to learn of the death on September 24 of Mr. J. A. Brown, aged seventy-two. He was an enthusiastic collector of flint implements, and author of a work entitled "Palæolithic Man in N.W. Middlesex" (1887).

A REUTER telegram from Stockholm states that Baron E. Nordenskjöld has arranged to make a zoological and anthropological expedition to the frontiers of Peru and Bolivia. The expedition will start at the end of December or the beginning of January.

REFERRING to the suggested existence of radium in the sun, a correspondent points out that not a single line in the ultra-violet spectrum of radium described by Sir William Crookes (*Proceedings Roy. Soc.*, vol. lxxii., No. 482) coincides exactly with a solar line. "The strongest radium line in Sir William's list is 3814.66*μ*, which is very near the solar line 3814.67*μ* assigned to iron and carbon, but is not coincident with it."

THE *Terra Nova* and the *Morning*, the vessels which are to go to the relief of the Antarctic expedition on board the *Discovery*, have arrived at Hobart. The two vessels will leave together in the first week of December. The Swedish ship *Frithiof*, which is going to the relief of Dr. Nordenskjöld's Antarctic Expedition, arrived at Buenos Ayres on October 30.

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At the end of last session it was decided to hold the meetings of the Physical Society alternately in the afternoons and evenings, and to change the place of meeting from the Chemical Society to the Royal College of Science, where the facilities for experimental demonstration are very complete. The first evening meeting will be held on Friday, November 13, at 8 p.m., when Sir Oliver Lodge will describe and illustrate by experiments (1) means for electrifying the atmosphere on a large scale, and (2) an arrangement for driving mercury pumps.

THE Paris correspondent of the *Times* states that the Sanitary Conference has at present under its consideration a project for the creation of an international sanitary bureau for the collection of information respecting infectious diseases, such as plague, cholera, and yellow fever, and also for the harmonious working of those sanitary regulations in the East which have so greatly contributed within the last five years to the preservation of public health as well as to the benefit of trade by the suppression of the old quarantine system. The international sanitary bureau would have its headquarters in Paris.

CAPTAIN J. M. JAMES, of Tokio, sends the following table showing the dates on which the first fall of snow took place on the summit of Fuji-Yama, the height of which in 1884 was 12,425 feet  $\pm$  25 feet:—1884, October 6, light; 1885, September 27, light; 1886, October 7, light; 1887, October 2, heavy fall; 1888, October 1, heavy fall; 1889, September 25, heavy fall; 1890, October 4, light; 1891, October 12, heavy fall; 1892, September 25, light; 1893, October 7, heavy fall; 1894, September 22, light; 1895, October 3, light; 1896, September 21, light; 1897, October 5, light; 1898, September 26, heavy fall; 1899, September 16, heavy fall; 1900, September 25, heavy fall; 1901, September 25, heavy fall; 1902, September 19, heavy fall; 1903, September 27, heavy fall.

AT the recent meeting of the German Association at Cassel, Prof. Penck, of Vienna, was to have given an address on geological time, but illness prevented him from doing so, and his place was taken at the last moment by Prof. Conwentz, of Berlin. The writer of the article upon the meeting, in *NATURE* of October 15 (p. 586), was unaware that any change had been made, and the titles he gave of addresses for delivery on September 22 were those announced in the programme. Prof. Conwentz has now sent us a report of his address; which dealt with the preservation of remarkable natural objects, especially of rare living plants and animals. He pointed to the destruction of orchids in Thüringen, the extermination of rare thistles on the German coasts, the cleansing of brooks from aquatic vegetation, and the destruction of large trees, and argued that, both for scientific and æsthetic reasons, districts should be set aside where the natural features of the country should be preserved, while care should be taken not to destroy needlessly objects of interest to natural history.

IN a letter to *NATURE* of August 6, Messrs. Hutchins, of Cape Town, referred to the "Research on the Eucalypts Especially in Regard to their Essential Oils" by Messrs. R. T. Baker and H. G. Smith, reviewed in *NATURE* for April 2 (vol. lxxvii. p. 524). The authors of this memoir have sent us a long letter of reply, in the course of which they say that the remarks upon their work are likely to lead to the idea that it has been confined to the chemistry of Eucalyptus oils almost entirely, and that new species have been named and a new classification for the Eucalypts formulated without sufficient warrant. They proceed to point out that their results are not those of the chemist